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Day treatment programs for adults with severe and persistent mental illness: Effectiveness measured in rates of recidivism

Pamela Jo' Gatfield

DAY TREATMENT PROGRAMS FOR ADULTS WITH SEVERE AND PERSISTENT MENTAL ILLNESS: EFFECTIVENESS MEASURED IN RATES OF RECIDIVISM

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Social Work

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ABSTRACT

This study measured the effectiveness of rehabilitative day treatment (RDT) programs for persons with severe and persistent mental illness, in San Bernardino County. The effectiveness of RDT services was determined by rates of recidivism. This study measured the frequency and number of days the RDT subjects were hospitalized before, during and after they received RDT services. Rehabilitative day treatment services were shown to have a statistically significant effect in reducing hospitalizations. In addition, persons who lived with family were found to have significantly fewer hospitalizations than those who lived independently.

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DEDICATION

This book is dedicated to my best friend and husband, Douglas Gatfield, who supported me financially, emotionally, and intellectually through the highs and lows of graduate school while letting me spend endless hours at Starbucks with my graduate school comrades.

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CHAPTER ONE

INTRODUCTION

Problem Statement

Prior to deinstitutionalization, persons with severe and persistent mental illness were often restricted to living in psychiatric institutions. Now, these individuals are entitled to mental health treatment in the least restrictive environment, therefore, they must rely on community programs and services to meet all of their needs including mental health care services.

It is well known that most persons with severe and persistent mental illness require a range of basic community services (housing, income maintenance, transportation, education, employment), along with comprehensive mental health services (therapy, day treatment, medications, social activities), that will allow them to effectively reside in the community. Day treatment programs are an essential part of this system. Day treatment is a long-term, goal directed program, geared toward helping those with longstanding interpersonal and community adjustment difficulties.

Day treatment programs have been shown to increase psychosocial functioning, reduce psychiatric psychiatric

hospitalizations, and, as a treatment modality, have been found to be just as effective as inpatient mental health programs (Turner, Korman, Lumpkin & Hughes, 1998; Horvitz-Lennon, Normand, Gaccione & Frank, 2001). More importantly, day treatment programs provide individuals with the social, vocational and educational skills that are essential to independent living, while increasing self-esteem and confidence, all of which contribute to a better quality of life (Husted, Wentler, Allen & Longhenery, 2000; Turner et al., 1998; Taylor, 1995; Lambert, Christensen & De Julio, 1983; La Commare, 1975). Since day treatment is highly effective in all of these areas, it stands to reason that discontinuing day treatment programs may adversely affect the persons who rely on them.

It has been argued recently that day treatment programs in this area are no longer necessary and as a result, the Department of Behavioral Health has decided to discontinue them. The closure of several day treatment programs prompted this study.

Purpose of the Study

The purpose of the present study is to examine the effectiveness of rehabilitative day treatment (RDT) and to

determine whether or not participation in a day treatment program is associated with fewer and/or shorter admissions to the hospital, Although there is a substantial body of literature to support the success of day treatment in preventing psychiatric hospitalizations and as an effective alternative to inpatient treatment, this study will look at post-treatment effects to determine levels of client functioning and program efficacy.

The day treatment programs involved in this study use the psychosocial rehabilitation model and are designed to offer a wide variety of therapeutic treatment services. They are intended to help persons with severe and persistent mental illness who need more comprehensive programs than are possible through outpatient visits, but who do not require psychiatric hospitalization. The psychosocial rehabilitation model is goal orientated and emphasizes social and vocational training to improve client skills and create opportunities for growth and independence.

Social workers, occupational therapists and mental health staff who are experienced in helping people with a variety of mental health issues provide day treatment services. Day treatment facilities are in community centers located near the client's residence.

Research has shown that persons with long-term mental illness can be helped in the community and avoid psychiatric hospitalizations (Anthony & Blanch, 1989). However, if adequate resources are not available these persons are likely to face hospital readmissions, overuse of emergency rooms and repeated encounters with the judicial system (Stroul, 1989).

It was recently argued that day treatment programs were no longer necessary and as a result several programs in this area will be closing. Based on research, which overwhelmingly substantiates the efficacy of day treatment, the social workers that provide treatment services anticipate that the consumers will be adversely affected after the program closes (Adverse effects means a decline in functioning). This can be assessed by comparing rates and duration of psychiatric hospitalizations during the program and after the program.

The data from this study was derived from closed files, looking at equal intervals of time before, during program participation and post-program to see if client functioning declines. Client functioning was determined by rates of psychiatric hospitalizations during both intervals of time. Using this design, the number of psychiatric hospitalizations and the mean length of stay

per psychiatric hospitalization were compared for both time periods.

Significance of the Project for Social Work

This study examined community support systems for persons with long-term mental illness. Such research is needed to help those with mental illness receive the care, support and services necessary for achieving full inclusion in all aspects of life. Social workers are major providers of mental health services. Social workers also pursue social justice on behalf of vulnerable populations such as persons with mental disabilities. According to the National Association of Social Workers (NASW) Policy Statement on Mental Health (Mayden & Nieves, 2000), in order to further improve the treatment of mental illness it is the position of NASW that:

- A full range of psychosocial services be available to all mental health consumers to ensure that they achieve optimal functioning in all areas of their lives;
- That "social workers should take the lead in advocating for a viable array of community-based mental health services… (P.227)";

- That integrated systems of care need to be developed to facilitate adequate access to services;
- That the Americans with Disabilities Act of 1990 be enforced so people with mental disorders can achieve full inclusion in all aspects of life;
- That treatment should occur in the most therapeutic and least restrictive environment;
- That social workers support self-help and consumer empowerment and
- That social workers should influence public policy toward improved prevention, diagnosis and treatment of mental illness.

All of these NASW positions on mental health support the need for this study. Comprehensive systems of care, client inclusion in the community, empowerment through psychosocial rehabilitation and improved systems of treatment for mental illness are all necessary for persons with severe and persistent mental illness to fully function in the community.

It has been said, "the ultimate goal of rehabilitation is the independent, effective, and full functioning of the client..." (Marshall & Deinmier, 1990,

p. 27). This study will improve the quality of life for persons with severe and persistent mental illness. This may be best accomplished through comprehensive community mental health services that include day treatment with psychosocial rehabilitation. This study evaluated the impact of losing RDT services for persons with severe and persistent mental illness.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Deinstitutionalization has had both positive and negative impacts on communities and persons with severe and persistent mental illness. The community mental health system must provide comprehensive support and services so individuals with severe mental disorders can live outside of an institution. Day treatment programs have proven to be an effective alternative to long-term psychiatric hospitalization. This chapter discusses why day treatment may be necessary to maintain persons with mental illness in the community and the theoretical perspectives guiding this research project.

Historical Perspective

In the past, persons with serious mental disorders were confined to mental institutions where they received long-term psychiatric care. These institutions were often cold and impersonal. In most cases they were located far from the person's home and community. During the 1950s, 1960s, and 1970s, many factors led to changes in the law and how the government provides mental health services. During the 1950's the use of new drugs helped persons to

live and function independently (Solomon & Marcenko, 1992). In the 1960's a number of court decisions provided for less restrictive alternatives for mental health care and mandated an individual's right to treatment in the least restrictive environment (Randall, 2001). In 1975, the U.S. Supreme Court ruled that nondangerous mental patients have the right to be treated or discharged. This allowed many individuals to be released from institutions and to receive care in their own community, a process known as deinstitutionalization (Stroul, 1989; Randall, 2001). Deinstitutionalization refers to the shift in care for mentally ill persons from long-term inpatient care to independent living (Randall, 2001).

This shift in government policy has had a large impact upon the mentally ill, their families and community systems, in both negative and positive ways. Along with an increase in personal freedom, independence, meaningful relationships and fulfillment, there are sometimes inadequate services. Stroul (1989) suggests that a trend of noninstitutionalization exists, in which persons are kept out of the hospital if at all possible and are instead referred to community based services. However, most communities are not equipped to meet the needs of persons with long-term mental illness. Furthermore, the

lack of community supports and services can lead to hospital readmissions, overuse of emergency rooms, encounters with the legal system and undue hardships for families (Stroul, 1989).

It is generally agreed that persons with long-term mental illness require a wide range of community supports and services (Stroul, 1989). To guide states and communities in planning for community based mental health systems the National Institute of Mental Health (NIMH) developed the community support system (Stroul, 1989). The NIMH recognizes that traditional mental health care is not enough and that an array of supportive services such as housing, income maintenance, medical care and rehabilitation are necessary for persons to function within the community (Anthony & Blanch, 1989). Community services have developed over time to include mental health treatment, health and dental services, crisis response services, income support and housing, rehabilitation services, protection and advocacy, case management services and peer support among others (Stroul, 1989). Out of the community services setting, two main types of mental health outpatient programs have evolved, the Intensive Day Treatment Program and the Rehabilitative Day Treatment Program.

The Intensive Day Treatment Program (IDT) is an intensive short-term program designed as an alternative to or transition from inpatient psychiatric treatment. Intensive Day Treatment is designed for persons with a serious mental disorder who have been discharged from an acute inpatient psychiatric unit, are at imminent risk of hospitalization, are having an acute crisis which may lead to hospitalization if not addressed, or have experienced failed attempts at being maintained in the community. IDT provides an organized and structured multi-disciplinary program to prevent or shorten acute hospitalization or avoid placement at a higher level of care. The program includes case management, group therapy, individual and family therapy. Case managers link clients to needed resources, provide individual attention and involve family and significant support persons in sustaining the client's community reintegration. Qualified psychotherapists provide individual and family therapy to participants. The duration of the program is 60 days at which time the participant will be discharged.

The Rehabilitative Day Treatment program is a long-term program designed to support and rehabilitate individuals with severe and persistent mental illness (Marshall & Deinmier, 1990). Day Treatment has been

conceptualized as a program to prevent psychiatric hospitalizations and provide ongoing supportive services. Day treatment programs have proven to be a necessary community service and they play a vital role in increased independence, functioning, and quality of life for persons with mental disabilities (Marshall & Deinmier, 1990; Guidry, Winstead, Levine & Eicke, 1979; Turner et al., 1998; LaCommare, 1975). Day Treatment services may also be referred to as "partial psychiatric hospitalization," "outpatient services" or "partial care services." Day Treatment is a planned therapeutic program during most or all of the day for persons who need more comprehensive programs than are possible through outpatient visits, but who do not require 24 hour care (Marshall & Deinmier, 1990).

Psychosocial Rehabilitation

Many day treatment programs use the psychosocial rehabilitation model for mental health treatment, which has become a fundamental part of many mental health care systems. This model is different than the medical model, which focuses on diagnosis and treatment of psychopathology. Psychosocial rehabilitation strives to educate persons with mental disabilities by increasing

their skills and creating opportunities for growth (Kupers, 1996). Knowing that each individual has unique abilities, problems and motivations, psychosocial rehabilitation works with the client's strengths to develop their potential for growth and independence (Stroul, 1989). Clients participate in goal setting, social skills training and the development of community and problem solving skills (Marshall & Deinmier, 1990).

Day Treatment activities include traditional group therapy, occupational therapy, behavioral groups, educational groups, social activities such as movies and field trips, employment counseling, employment readiness classes and many other services designed to increase psychosocial functioning (Marshall & Deinmier, 1990; Stroul, 1989).

Effectiveness of Day Treatment

A large body of literature reports that day treatment is significantly effective, for clients with severe and persistent mental illness (Guidry et al., 1979; Marshall & Deinmier, 1990; Turner et al., 1998; Swartz, Swanson, Wagner, Burns, Hiday & Borum, 1999, Robinson, 1999; Bateman & Fonagy, 1999; LaCommare, 1975; Husted et al., 2000). Several studies have found that attending day

treatment reduces psychiatric hospitalizations (Guidry, et al., 1979; LaCommare, 1975; Swartz et al., 1999; Taylor, 1995; Lambert et al., 1983; Husted et al., 2000) and if hospitalized, reduces the number of days in the hospital (Guidry et al., 1979; LaCommare, 1975; Lambert et al., 1983). Studies also show that patients in day treatment and their families have high levels of satisfaction with the programs (Granello, Granello & Lee, 1999; Solomon & Marcenico, 1992; Horvitz-Lennon et al., 2001). An additional benefit of day treatment is the improvement found in quality of life for the participants (Husted et al., 2000; Turner et al., 1998) measured in higher degrees of independence, opportunities to gain or maintain employment, developing more stable interpersonal relationships, greater social adjustment and higher levels of self-esteem (Guidry et al., 1979; Turner et al., 1998; Husted et al., 2000).

Lambert et al., (1983) found that day treatment participants experienced a significant reduction in psychopathology with increased levels of functioning within the community. In fact, among the major benefits seen with day treatment as opposed to inpatient care are significantly higher level of community function and acquired psychosocial skills (Anthony & Blanch, 1989;

Stroul, 1989; LaCommare, 1975), along with increased employment, productivity, and skill development (Stroul, 1989; Anthony & Blanch, 1989).

Several studies have found day treatment services to be just as effective as inpatient treatment (Bateman & Fonagy, 1999; Horvitz-Lennon et al., 2001; Talbott, 1985) while providing services at a much lower cost (Taylor, 1995; Guidry al., 1979). Horvitz-Lennon et al. (2001) did a meta-analysis of 18 studies published from 1957-1997 and found that outcomes for partial psychiatric hospitalization patients were no different than those of inpatient and that patients and their families were more satisfied with the outpatient programs.

In some studies, increased levels of satisfaction were associated with superior services (Robinson, 1999; Horvitz-Lennon et al., 2001). In particular, Solomon et al. (1992) found that outpatient services were better at teaching about medication, motivation, coping skills, crisis assistance and giving emotional support. Overall, families were found to be more satisfied with outpatient mental health services than with inpatient services (Anthony & Blanch, 1989; Solomon & Marcenko, 1992; Robinson, 1999; Granello et al., 1999).

Day treatment was also found to be effective in working with all types of mental disorders (LaCommare, 1975), showing significant improvement over psychopathological symptoms (Robinson, 1999; Bateman & Fonagy, 1999; Granello et al., 1999).

It appears that day treatment programs as a treatment modality have many benefits for the participants, families and communities. They are more economical than inpatient treatments, just as effective, and give the consumer freedom to make their own choices while living in the community. Without this ongoing supportive service many persons with severe and persistent mental disabilities could end up in the hospital as suggested by the decreased rates of recidivism following program participation (Guidry et al., 1979; LaCommare, 1975; Husted et al., 2000; Taylor, 1995).

Horvitz-Lennon et al., (2001) point out that many of the nonrandomized studies failed to report whether patients had been excluded or not based on built-in program criteria. This information is needed to determine the severity of the participant's mental illness since successful programs may have had higher functioning clients. Some studies have compared partial and full psychiatric hospitalization (inpatient and outpatient

programs) (Horvitz-Lennon et al., 2001; Solomon & Marcenko, 1992; Bateman & Fonagy, 1999), while others evaluated various treatment approaches (Marshall & Deinmier, 1990; Husted et al., 2000). All of the studies included in this literature review measured the effects of day treatment preprogram compared to during the program (Swartz et al., 1999; Turner et al., 1998; Husted et al., 2000; Guidry et al., 1979; Bateman & Fonagy, 1999; Robinson, 1999; Solomon & Marcenko, 1992).

Whereas there is a substantial body of literature to support day treatment as an effective alternative to inpatient treatment and supporting its effectiveness in preventing psychiatric hospitalizations, there have been no attempts to demonstrate that these conditions exist after the treatment program has stopped. This study was prompted because the Department of Human Services discontinued the rehabilitative day treatment program and replaced it with the intensive day treatment programs. This study will examine rates of psychiatric hospitalization before, during and after rehabilitative day treatment stops.

Theories Guiding Conceptualization

Theories guiding conceptualization of this study, as well as prior studies are the psychosocial and phenomenological perspectives. This study looks at the person in the environment and what services and supports are needed to ensure them the best quality of life within the community setting. Institutionalized care once provided for all aspects of a person's life including shelter, food, clothing, medical care, structured activities, therapy and rehabilitation (Stroul, 1989). Now means for meeting all of the basic human needs as well as therapy and rehabilitation must be accessible in the community. By looking at the effectiveness of RDT, it can be determined if this is a needed community service.

The phenomenological/client-centered perspective is also considered. The phenomenological perspective takes into account each person's individual life experience and perspectives based on those experiences. Therefore, each person reacts to the world from his or her own perspective. Client-centered theory is based on the idea that the person innately knows what is in their best interest and is naturally goal directed (Nicholas & Schwartz, 2001).

The psychosocial rehabilitation model used in day treatment takes a humanistic approach by focusing on client strengths. This model works by creating opportunities and developing the client's potential for growth and independence. Programs using this approach have shown to increase the client's quality of life measured by higher levels of confidence, self esteem, sense of belonging, avoidance of psychiatric hospitalizations and seeing themselves as a problem solver (Husted et al., 2000).

Summary

Individuals with severe and persistent mental illness must be afforded the right to treatment outside of an institutional inpatient setting. Persons who decide to live in the community need to have access to comprehensive community mental health services that include psychosocial rehabilitation. Day treatment programs offer an effective way to provide psychosocial rehabilitation for persons living in the community and they are just as effective as inpatient treatment. Day treatment also results in higher levels of client satisfaction, higher levels of community skills, employment, interpersonal relationships and overall improved quality of life. The discontinuance of

the Rehabilitative Day Treatment Program may decrease client psychosocial functioning and increase psychiatric hospitalizations.

CHAPTER THREE

METHODS

Introduction

This research project was a descriptive, single group, pre and post-comparison study that measured the effects of discontinuing RDT services for severely and persistently mentally ill clients in San Bernardino County. Outcomes were measured by the number of psychiatric hospitalizations and number of days the subjects spent in the hospital for a period of three months before RDT treatment, three months during RDT treatment and three months post RDT treatment. This study also considers age, gender, ethnicity, marital status and living arrangements as other variables that could influence rates of psychiatric hospitalization.

Study Design

The purpose of the study was to evaluate the efficacy of RDT programs in San Bernardino County. The effectiveness of the programs was measured by rates of psychiatric hospitalization and by the average length of stay when hospital admission was unavoidable.

This study is a descriptive, single group, pretest, posttest research project, designed to measure the

effectiveness of RDT programs in San Bernardino County. Subjects were utilized as their own control by comparing equal time intervals before day treatment, during day treatment participation and post-day treatment participation. This design was selected because no comparable control group could be identified with characteristics equivalent to the sample population.

The limitations of the single group, pretest - posttest design is the inability to control for possible factors other than the independent variable. Alternatively, this design can determine precisely how the independent variables affect a single subject while eliminating the characteristic differences that would occur from comparing separate subjects. Using this design, the number of psychiatric hospitalizations and mean length of stay per psychiatric hospitalization was compared for three time periods.

The hypotheses were: clients receiving rehabilitative day treatment services will have fewer psychiatric hospitalizations and spend fewer days in the hospital when hospitalization is unavoidable.

Sampling

The population of interest for this study was adults diagnosed with severe and persistent mental illness that attended the RDT programs in San Bernardino County. A purposive sample was drawn from the Department of Behavioral Health case records and every individual enrolled in the day treatment programs as of Sept. 3, 2002, was considered for the study. As a requirement for participation, subjects must have attended the program for the entire three-month period (Aug. 1, 2002 - Oct. 31, 2002).

Additionally, persons referred to the program must have met the specified program participation criteria. They were required to attend five days per week, assume responsibility for their transportation to and from the program, to participate actively, to be properly groomed and have appropriate behavior. The day treatment program accepted all persons with a mental illness as their primary Axis I diagnosis. However, individuals with a primary diagnosis of substance abuse were referred to an appropriate alternative program.

The sample used for this study was comprised of 95 persons ranging in age from 20 to 67 years old who

participated in day treatment services between Aug. 1, 2002 and Oct. 31, 2002.

Data Collection and Instruments

Data collection included gathering information from client files on age, gender, ethnicity, living arrangements and marital status. The total number of psychiatric hospitalizations (frequency) was counted as well as the total number of days (duration) the subject was hospitalized over a three-month period before day treatment, three months during day treatment and three months post treatment.

The dependent variables were frequency and duration of psychiatric hospitalization. Independent variables included gender, age, ethnicity, marital status and living arrangements (independent or board and care). Independent variables of gender, ethnicity, marital status and living arrangements were nominal, while the variable of age was interval. The frequency and number of days of psychiatric hospitalization were ratio variables. The variables being measured in this study are presented on the data collection sheet in Appendix B.

Procedures

The data source used for this study was information from the Department of Behavioral Health (DBH) SIMON computer system which tracks the services DBH clients receive and also lists demographic information such as marital status. The Managed Care Inpatient Program computer information system on Fee For Service (FFS) was also be used to track psychiatric hospitalizations. Only hospitalizations within San Bernardino County were considered since out of County facilities are not reflected in these data sources.

When a patient was referred to the community day treatment program, several forms were required to be completed under California state laws and DBH regulations. These forms include the consent for outpatient treatment (Appendix A.) allowing client information to be used for research purposes. This form, as well as archived information obtained from the DBH computer system provided the key data and clinical information required for the study. The data collection sheet used to gather information and provide client confidentiality is attached as Appendix B.

Protection of Human Subjects

To ensure the confidentiality of the participants, the names and identifying data on the individual subjects were not used. A random research number was assigned to each case file during the data collection process and no information was available to identify any individual in this study. All information was tabulated using the data collection sheet to insure client confidentiality (see Appendix B). In addition, no personal involvement or contact was made with the participants to ensure that any risks to the participants were minimal.

Furthermore, state law and DBH regulations require that prior to treatment, all participants complete the consent for outpatient treatment form, which allows client information to be used for research purposes (see Appendix A).

This research project was approved for protection of human subjects by the Department of Social Work Sub-Committee of the Institutional Review Board of California State University, San Bernardino and by the San Bernardino County, Department of Behavioral Health, Research Review Committee (see Appendix C).

Data Analysis

Quantitative analysis was used to examine the strength of relationships between the independent and dependent variables. All data was entered in the SPSS program, and analyzed using descriptive statistics. The variables were initially analyzed by running frequencies and descriptive statistics to measure central tendency and dispersion. The dependent variables were examined for central tendency and distribution using the standard deviation. Also, bivariate (t-tests) analyses were done. These analyses were used to determine whether psychiatric hospitalizations decreased during the three-month measurement period and also to determine the significance of the other variables that influenced the rates of psychiatric hospitalization. Cross tabulation analysis were also used to assess associations among the variables.

Summary

The effectiveness of rehabilitative day treatment with severely and persistently mentally ill adults was measured by frequency and duration of psychiatric hospitalizations. Other factors such as age, marital status and living arrangements that may further influence treatment outcomes were also studied. A pretest, posttest,

single group design was selected to control for possible differences between groups and better identify the effects of the independent variables. Quantitative analysis was used to determine the strength of the relationships between independent and dependent variables.

CHAPTER FOUR

RESULTS

Introduction

The dependent variables of frequency and duration of hospitalizations were compared for three time periods which include, before, during, and after RDT by doing bivariate analyses (t-tests). Cross tabulation analyses were used to assess associations between the independent variables gender, marital status, ethnicity and living situation and the dependent variables.

Presentation of the Findings

Of the 127 participants enrolled, twenty-two were excluded from the study because they were not in the RDT program for the entire 3-month period that was measured (June 1, 2002 to August 31, 2002). The study sample of 105 subjects consisted of 53 males and 52 females with a mean age of 40. The sample was comprised of 51% Caucasians, 16% African Americans, 28% Hispanics, 3% Asians, 1% Native Americans and 1% other. Of the 105 subjects, 58% lived independently, 39% lived with family and 3% had other living arrangements. Sixty three percent of the sample were single, 8% were married, and 14% were divorced, widowed or separated, with 15% documented as unknown.

The frequency of hospitalizations were compared for three months before, during and post RDT. During the three months prior to starting RDT, 28% had one or more hospitalization. During the three-month enrollment period, 3% had one or more hospitalization. During the three-month measurement period post RDT, 11% had one or more hospitalization. These changes were statistically significant (see Table 1).

Table 1. Comparison of Prior Frequency of Hospitalization to Frequency of Hospitalizations During and After Rehabilitative Day Treatment

Number of Hospitalizations					
Prior to RDT		During RDT		After RDT	
None	76	None	101	None	93
One Or More	29	One Or More	4**[a]	One Or More	12*[a]
Total	105	Total	105	Total	105

* = $p < 0.05$
** = $p < 0.001$
[a] = t-test for change from previous period

The total number of days the sample was hospitalized during the three time periods was also compared. Prior to RDT 14 subjects (14%) were hospitalized for 1-60 days and 15 subjects (15%) were hospitalized for 60 or more days.

During RDT, 4 subjects (14%) were hospitalized for 1-13 days. Post RDT, 11 subjects (11%) were hospitalized from 2-35 days. These changes were also statistically significant (see Table 2).

Table 2. Comparison of Total Days of Hospitalization Prior, During and Post, Rehabilitative Day Treatment

Total Days of Hospitalization					
Prior to RDT		During RDT		After RDT	
No Days	76	No Days	101	No Days	93
One to Sixty Days	14	One to Sixty Days	4**[a]	One to Sixty Days	12*[a]
Over Sixty Days	15	Over Sixty Days	0**[a]	Over Sixty Days	0*[a]
Total	105	Total	105	Total	105

* = $p < 0.05$
** = $p < 0.001$
[a] = t-test for change from previous period

In addition, when the pretreatment period was compared to the program enrollment period, a reduction of 100% was noted in hospitalizations lasting 60 days or longer (from 15 to 0 subjects) and a 74% reduction was observed in hospitalizations lasting 1-60 days (from 15 to 4 subjects).

Bivariate analyses (t-tests) were also conducted to compare hospitalizations and days in the hospital pre, during and post RDT. Statistical significance was found when comparing hospitalization rates between each time period: hospitalizations compared for periods prior to treatment ($\bar{X}$ = 0.32 days) and during the treatment ($\bar{X}$ = 0.05 days) period, $t(104) = 4.210$, $\underline{p} = .000$; hospitalizations compared for periods during ($\bar{X}$ = .20 days) the treatment period and post ($\bar{X}$ = 1.29 days) treatment, $t(103) = -2.124$, $\underline{p} = .036$; and hospitalizations compared for periods of pre treatment ($\bar{X}$ = 12.83 days) and post ($\bar{X}$ = 1.29 days) treatment, $t(103) = 4.098$, $\underline{p} = .000$.

Of the cross tabulation analyses used to assess associations between independent and dependent variables, only living situation and rates of hospitalization were found to be statistically significant. Subjects who lived with family were found to have significantly lower rates of hospitalizations for all time periods, compared to persons living independently ($\chi^2 = 11.820$, df = 1, $p = 0.001$).

Trends were observed for most of the associations examined although they were not statistically significant.

Age, gender, ethnicity and marital status did not significantly influence the success of the rehabilitative day treatment services. However, for each of these variables, the shift from increased hospitalizations prior to RDT services, to decreased hospitalizations during and after the treatment period continued to be observed.

Summary

In the sample studied, living situation and rate of hospitalization were found to be statistically significant. Persons living with family had significantly lower rates of hospitalizations compared to persons living independently. In addition, rates of hospitalization changed significantly, during and after rehabilitative day treatment. Age, gender, ethnicity and marital status were not found to influence the rate of hospitalization.

CHAPTER FIVE

DISCUSSION

Introduction

Rehabilitative Day Treatment services were shown to have a statistically significant effect in reducing hospitalizations. Additionally, persons who lived with family were found to have significantly fewer hospitalizations than those who lived independently.

Discussion

This study supported the hypothesis that clients receiving rehabilitative day treatment services will have fewer psychiatric hospitalizations and spend fewer days in the hospital when hospitalization is unavoidable. The reduction in frequency and duration of hospitalizations were found to be statistically significant in all time periods measured. These findings also support prior studies which found day treatment programs effective in helping persons with severe and persistent mental illness. Not only did hospitalizations decrease significantly during the RDT enrollment period when compared to pre RDT (from 29 to 4), the mean number of days spent in the hospital decreased from 13.41 before RDT, to .20 during RDT. This supports the notion that clients attending

rehabilitative day treatment have increased levels of functioning, resulting in decreased hospitalizations.

After the RDT program, there was a significant increase in hospitalizations when compared to the RDT enrollment period. However, the hospitalization rates were still significantly lower than the pre enrollment period. The decrease in hospitalizations post RDT could also be seen as a sustained residual effect of the program, which may change over time. This further strengthens the conclusion that RDT services have an enduring effect in reducing hospitalizations.

Persons who lived with family were found to have significantly fewer hospitalizations than persons who lived independently. Married persons were also shown to have fewer hospitalizations than those not married, however, this trend could not be tested for statistical significance due to the small sample size. These findings support the idea that family members play an important role in providing clients with social support and emotional encouragement.

Due to the small sample size, several ethnic categories were collapsed to determine whether Caucasian and minority populations were affected differently by RDT services. The results indicated no significant differences

and both groups were shown to have equally positive outcomes.

Limitations

This was a preliminary study used to measure initial effectiveness of RDT services. A longer measurement period prior to, during, and after the provision of RDT services could overcome problems in this study, such as the small sample size which interfered with meaningful statistical analysis with several of the independent variables.

Increasing the measurement time period might also show clearer, more meaningful results for hospitalizations. The before, during and post RDT measurement periods were 3 months each (approximately 90 days). Of the subjects studied, many of those with hospitalizations had extensive hospitalization histories, which were not revealed because of the 3-month time frame. Increasing the measurement period would give clearer, more detailed results.

Most of the sample had never been married (77%) and of those who had married, twelve were currently divorced or separated. The small sample size for married individuals did not make it possible to test for statistical significance. Increasing the sample size may

or may not increase the percentage of married persons for testing the statistical significance of marital status in future studies.

The living situation categories were collapsed from six (independent, board & care, room & board, family and other) to two (independent and family) to increase cell sizes while reflecting levels of support. Grouping the categories may or may not be accurate in reflecting levels of support since some living situations may have higher levels of support than others.

Recommendations for Social Work Practice, Policy and Research

This study was a preliminary study used to measure the effectiveness of RDT services determined by rates of recidivism. Rehabilitative day treatment was found to have a significant and immediate effect on reducing hospitalizations and RDT appears to have a residual effect in sustaining these lower rates after the program has ended.

A longer measurement period before, during and after RDT services is needed to determine further long-term residual effects of treatment services. Previous studies had found a greater initial response to day treatment, which lessened over time.

Another recommendation would be to measure the cost effectiveness of RDT outpatient services in comparison with costs of hospitalization. This could help aid the Department of Behavioral Health in determining cost effective modes of services.

Rehabilitative day treatment should continue to be researched as an outpatient treatment modality for persons with severe and persistent mental illness. Such research is needed to help those with mental illness receive the care and support needed to live independently and successfully in the community. Social policy should continue to develop and expand the outpatient services available to this vulnerable population.

Conclusions

Rehabilitative day treatment services were found to be effective in reducing hospitalizations and the number of days spent in the hospital among persons who have a severe and persistent mental illness. Statistically significant reductions in hospitalizations were found in all time measurement periods. In addition, persons living with family were shown to have significantly fewer hospitalizations and to spend fewer days in the hospital than those who lived independently. The RDT program is

effective in decreasing hospitalizations in persons with severe and persistent mental illness.

APPENDIX A

CONSENT FOR OUTPATIENT

TREATMENT

SAN BERNARDINO COUNTY DEPARTMENT OF BEHAVIORAL HEALTH / MENTAL HEALTH PLAN
CONSENT FOR OUTPATIENT TREATMENT

1. Outpatient services may include assessment; diagnosis; crisis intervention; individual, group, or family therapy; medication; day treatment services; training in daily living and social skills; prevocational training; and/or case management services. Outpatier services are provided by qualified professional staff members of the Department/Plan. (You may also be financially responsible for treatment planning and consultation activities which may take place without you being present.)

2. Outpatient treatment may consist of contacts between qualified professionals and clients, focusing on the presenting problem anc associated feelings, possible causes of the problem and previous attempts to cope with it, and possible alternative courses of actic and their consequences. The frequency and type of treatment will be planned by you and the treatment staff.

3. You will be informed by means of a separate consent form about any psychotropic medication recommended for use as part of tl treatment.

4. You are expected to benefit from treatment, but there is no guarantee that you will. Maximum benefits will occur with regular attendance, but you may feel temporarily worse while in treatment.

5. You will be expected to pay (or authorize payment of) all or some part of the costs of treatment received, if possible. The amour you pay is dependent upon your ability to pay based on your income and family size. If legal action is initiated to collect your bi you will be responsible for paying all reasonable attorney fees and court costs in addition to any judgment rendered against you

6. Failure to keep your appointments or to follow treatment recommendations may result in your treatment being discontinued. If you cannot keep your appointment, you are expected to notify the clinic.

7. All information and records obtained in the course of treatment shall remain confidential and will not be released without your written consent except under the following conditions:
   a. You are a non-emancipated minor, ward of the court, or an LPS conservatee.
   b. To government law agencies to protect the lives of federal and state elective constitutional officers and their families.
   c. To the courts if subpoenaed or if otherwise necessary for the administration of justice.
   d. To the extent necessary to prevent harm to reasonably foreseeable victims if a client presents a serious danger of violence tc others (Welfare & Institutions Code 5328r).
   e. To Juvenile authorities when child abuse is observed or suspected (Penal Code Section 11165, et. seq.).
   f. To Adult Protective Services when elder abuse is observed or suspected (W&I Code Section 15630, et. seq.).
   g. To prevent self-induced harm or death (Johnson vs. County of Los Angeles, 1983).
   h. To certain employees of the Behavioral Health Department and its contract agencies, and to certain community health providers (including exchange of information between the Mental Health Plan and the client's community providers authorized by the MHP), as necessary for treatment and administrative purposes.
   i. Under certain circumstances as set forth in W&I Code Sections 5328 through 5328.15, which you may read upon request.

8. You have the right to accept, refuse, or stop treatment at any time.

9. For the duration of treatment, I authorize San Bernardino County Department of Behavioral Helath to apply for and to receive payment of medical benefits from any and all health insurance plans by which I am covered, including Medicare and related pub payor programs.

10. The Medi-Cal eligible individual (to include parents or guardians of Medi-Cal eligible children/adolescents) has been informed ____ verbally or ____ in writing that:
    Acceptance and participation in the mental health system is voluntary and is not a prerequisite for access to other community services. Individuals retain the right to access other Medi-Cal reimbursable services and have the right to request a change c provider, staff person, therapist, coordinator, and/or case manager to the extent permitted by law.

I have read the above, and I agree to accept treatment, and I further agree to all conditions set forth herein. I acknowledge that I have received a copy of this agreement.

Client_____ Witness_____

Parent/Guardian/Conservator_____ Date_____

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APPENDIX B

DATA COLLECTION SHEET

Data Collection

Case Number _____ I.D. Number _____

Agency 1. CID _____ 2. Rancho _____ 3. Upland _____

4. Mesa _____ 5. Ujima _____

Gender: 1. Male _____ 2. Female _____ Age _____

Ethnicity: 1. Cauc _____ 2. AA _____ 3. Hisp _____ 4. Asian _____ 5. NAmer _____
6. Other _____

Living Arrangements: 1. Independent _____ 2. Board & Care _____

3. Room & Board _____ 4. Family _____ 5. Other _____

Marital Status: 1. Single ___ 2. Married ____ 3. Divorced ____

4. Widowed ____ 5. Separated _____

Hospitalizations (Before TX) _____ Days in Hosp (Before TX) _____

Hospitalizations (During TX) _____ Days in Hosp (During TX) _____
6/1/02- 8/31/02

Hospitalizations (Post TX) _____ Days in Hosp (Post TX) _____
11/1/02-1/31/03

Follow up services:

1. None _____ 2. Meds only _____ 3. Case Mgt _____

4. Therapy _____ 5. More than one _____

APPENDIX C

SAN BERNARDINO COUNTY DEPARTMENT OF BEHAVIORAL HEALTH APPLICATION FOR PROJECT APPROVAL

8. Signature of Program Manager(s) whose personnel or patients will be affected by this project:

David Dean — 1/28/03
Program Manager Signature — Date

Ralph [illegible] PhD — 1/28/03
Program Manager Signature — Date

[illegible] LCSW, PMHI — 1/29/03
Program Manager Signature — Date

9. Signature of Deputy Director whose personnel or patients will be affected by this project:

N/A
Deputy Director, Community Treatment Program, — Date

N/A
Assistant Director — Date

10. Signature of Committee Chair and Director of Department of Behavioral Health (To be signed after committee approval of project.)

Keith E. Harris PhD — 2/18/03
Chief, Research and Evaluation — Date

Russell Lopez — 3/4/03
Director, Department of Behavioral Health — Date

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